

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claim 15. Please amend claims 12, 16, and 20 as follows:

Listing of Claims:

1. (Previously Presented) An apparatus for determining a dimension of a feature of a semiconductor device, comprising:
 - at least one source of electrons;
 - a focusing device positioned proximate to the source of electrons to focus electrons emitted by the source and form an electron beam, the focusing device focusing the electron beam to have a first depth and a second depth of focus and form at least one representation of the semiconductor device corresponding to electrons focused at the first and second depths of focus and impinging on one or more surfaces of the semiconductor device;
 - a support aligned with the electron beam and having a support surface to engage the semiconductor device and support the semiconductor device, one of the electron beam and the support being movable relative to the other of the electron beam and the support in any of the x, y, or z planes.
2. (Original) The apparatus of claim 1 wherein the support is movable relative to the source in a direction generally transverse to the electron beam.
3. (Original) The apparatus of claim 1 wherein the support is movable relative to the source in a direction generally aligned with an axis of the electron beam.
4. (Original) The apparatus of claim 1, further comprising a first detector spaced apart from the support to receive a first flow of electrons from the semiconductor device and generate a first signal corresponding thereto, and a second detector spaced apart from the support to receive a second flow of electrons from the semiconductor device and generate a second signal corresponding thereto.

5. (Previously Presented) The apparatus of claim 4, further comprising a third detector operatively coupled to either the support or the source to detect movement of either the support or the source, the third detector generating a third signal corresponding to movement detected thereby.

6. (Previously Presented) The apparatus of claim 5, further comprising a memory device coupled to at least one of the first, second and third detectors to store the signal generated by the at least one detector.

7. (Previously Presented) The apparatus of claim 5, further comprising a display coupled to at least one of the first, second and third detectors to graphically display a voltage generated by the first and second electron flows as a function of the movement detected by the third detector.

8. (Previously Presented) The apparatus of claim 5, further comprising a printing device coupled to at least one of the first, second and third detectors to print a representation of a voltage generated by the first and second flows of electrons as a function of the movement detected by the third sensor.

9. (Original) The apparatus of claim 1 wherein the source of electrons is a first source, the electron beam corresponding thereto is a first electron beam focused at the first depth of focus, and the focusing device is a first focusing device, further comprising:

a second source of electrons spaced apart from the first source of electrons; and

a second focusing device positioned proximate to the second source of electrons to focus electrons emitted by the second source and form a second electron beam, the second focusing device focusing the second electron beam to have the second depth of focus simultaneously with the first focusing device focusing the first electron beam to have the first depth of focus.

10. (Original) The apparatus of claim 1 wherein the focusing device is a first focusing device and the electron beam is a first electron beam, further comprising:

a port surface positioned intermediate the source and the first focusing device and having first and second ports therethrough, the first port being positioned proximate to the source to form the first electron beam, the second port spaced apart from the first port to form a second electron beam; and

a second focusing device positioned proximate to the second port to focus the second electron beam to have the second depth of focus simultaneously with the first focusing device focusing the first electron beam to have the first depth of focus.

11. (Original) The apparatus of claim 1 wherein the focusing device focuses the electron beam to have the first depth of focus prior to focusing the electron beam to have the second depth of focus.

12. (Currently Amended) An apparatus for determining a dimension of a feature of a semiconductor device, comprising:

a source of electrons;

a port surface having a first and second ports therethrough, the first port being positioned proximate to the source to form a first electron beam when electrons pass therethrough, the second port spaced apart from the first port to form a second electron beam when electrons pass therethrough;

a first focusing device positioned proximate to the first port and adjacent the first electron beam to focus the first electron beam on a first position surface;

a second focusing device positioned proximate to the second port and adjacent the second electron beam to focus the second electron beam on a second position surface that is different from the first position; ~~and~~

a support aligned with the first and second ports and having a support surface to engage the semiconductor device and support the semiconductor device at the first and second positions, one of the support and the source being movable relative to the other of the support and the source in any of the x, y, or z planes; and

a first detector spaced apart from the support to receive a first flow of electrons from the semiconductor device and generate a first signal corresponding thereto, and a second detector spaced apart from the support to receive a second flow of electrons from the semiconductor device and generate a second signal corresponding thereto.

13. (Original) The apparatus of claim 12 wherein the support is movable relative to the source in a direction generally transverse to at least one of the first and second electron beams.

14. (Original) The apparatus of claim 12 wherein the support is movable relative to the source in a direction generally aligned with an axis of at least one of the first and second electron beams.

15. (Canceled)

16. (Currently Amended) The apparatus of claim ~~[[15]]~~12, further comprising a third detector operatively coupled to one of the support and the source to detect movement of the one of the support and the source, the third detector generating a third signal corresponding to movement detected thereby.

17. (Previously Presented) The apparatus of claim 16, further comprising a memory device coupled to at least one of the first, second and third detectors to store the signal generated by the at least one detector.

18. (Previously Presented) The apparatus of claim 16, further comprising a display coupled to at least one of the first, second and third detectors to graphically display a voltage generated by the first and second electron flows as a function of the movement detected by the third detector.

19. (Previously Presented) The apparatus of claim 16, further comprising a printing device coupled to at least one of the first, second and third detectors to print a representation of a voltage generated by the first and second flows of electrons as a function of the movement detected by the third sensor.

20. (Currently Amended) An apparatus for determining a dimension of a semiconductor device feature, comprising:

first and second sources of electrons;

a first ~~focusing device~~ lens positioned proximate to the first source of electrons to receive a first electron beam emitted therefrom ~~to focus a first electron beam emitted from the first source on a first position surface~~;

a second ~~focusing device~~ lens positioned proximate to the second source of electrons to receive a second electron beam emitted therefrom ~~to focus a second electron beam emitted from the second source on a second positions surface~~;

a port surface having a first port and a second port therethrough, the first port spaced apart from the first lens to receive the first electron beam passing through the first lens, the second port spaced apart from the first port and from the second lens to receive the second electron beam passing through the second lens;

a third lens configured to focus the first electron beam on a first position surface and positioned to receive the first electron beam passing through the first port;

a fourth lens configured to focus the second electron beam on a second position surface and positioned to receive the second electron beam passing through the second port; and

a support ~~aligned with the first and second focusing devices~~ and configured to engage the semiconductor device and located to receive the first and the second electron beams, one of the support and the sources of electrons being movable relative to the other of the support and the sources of electrons in any of the x, y, or z planes.

21. (Original) The apparatus of claim 20 wherein the support is movable relative to the sources of electrons in a direction generally transverse to at least one of the first and second electron beams.

22. (Original) The apparatus of claim 20 wherein the support is movable relative to the sources of electrons in a direction generally aligned with an axis of at least one of the first and second electron beams.

23. (Original) The apparatus of claim 20, further comprising a first detector spaced apart from the support to receive a first flow of electrons from the semiconductor device and generate a first signal corresponding thereto, and a second detector spaced apart from the support to receive a second flow of electrons reflected from the semiconductor device and generate a second signal corresponding thereto.

24. (Previously Presented) The apparatus of claim 23, further comprising a third detector operatively coupled to either the support or one of the sources to detect movement of either the support or one of the sources, the third detector generating a third signal corresponding to movement detected thereby.

25. (Previously Presented) The apparatus of claim 24, further comprising a memory device coupled to at least one of the first, second and third detectors to store the signal generated by the at least one detector.

26. (Previously Presented) The apparatus of claim 24, further comprising a display coupled to at least one of the first, second and third detectors to graphically display a strength of the first and second electron flows as a function of the movement detected by the third detector.

27. (Previously Presented) The apparatus of claim 24, further comprising a printing device coupled to at least one of the first, second and third detectors to print a

representation of a strength of the first and second flows of electrons as a function of the movement detected by the third detector.

Claims 28-82 (Cancelled)